Title (en)

AN ARRANGEMENT FOR AND A METHOD OF CONTROLLING FLOW OF SOLID PARTICLES AND A FLUIDIZED BED REACTOR

Title (de)

ANORDNUNG UND VERFAHREN ZUR STEUERUNG DER STRÖMUNG VON FESTSTOFFPARTIKELN UND WIRBELBETTREAKTOR

Title (fr)

AGENCEMENT ET PROCÉDÉ DE COMMANDE D'ÉCOULEMENT DE PARTICULES SOLIDES ET RÉACTEUR À LIT FLUIDISÉ

Publication

EP 3840871 A1 20210630 (EN)

Application

EP 18769413 A 20180824

Priority

FI 2018050603 W 20180824

Abstract (en)

[origin: WO2020039117A1] A method of and an arrangement (40) for controlling a flow of solid particles, the arrangement comprising a vertical inlet pipe (16') for directing the flow of solid particles downwards therein and having a bottom (50) at a level L0, a first outlet chute (26') and a second outlet chute (34') in particle flow connection with the vertical inlet pipe and fluidizing means (60, 62, 64, 68, 76) for directing controlled first and second sub flows formed from the flow of solid particles to the first and second outlet chutes, respectively, wherein the arrangement (40) comprises a branch (42, 42', 42") in particle flow connection with an opening (72) on a side wall of the vertical inlet pipe (16') for directing the first sub flow of solid particles to the first outlet chute (26'), wherein the opening (72) has a lower edge at a level L1 that is higher than L0, and a horizontally extending intermediate pipe (46) for directing the second sub flow of solid particles to the second outlet chute (34'), the horizontally extending intermediate pipe comprising at least one nozzle (60, 62, 64) for feeding fluidizing gas to the horizontally extending intermediate pipe and having a first end (48) in particle flow connection with the bottom (50) of the vertical inlet pipe (16') at the level L0 and a second end (52) in particle flow connection with a bottom end (54) of a vertically extending riser pipe (56), an upper end (70) of the vertically extending riser pipe (56) being in particle flow connection with the second outlet chute (34') at a level L2 that is higher than L1.

IPC 8 full level

B01J 8/18 (2006.01); **B01J 4/00** (2006.01); **B01J 8/00** (2006.01); **B01J 8/38** (2006.01); **F22B 31/00** (2006.01); **F23C 10/26** (2006.01)

CPC (source: EP KR US)

B01J 4/005 (2013.01 - EP KR US); **B01J 8/003** (2013.01 - EP KR US); **B01J 8/1809** (2013.01 - EP KR US); **B01J 8/388** (2013.01 - EP KR); **F22B 31/0007** (2013.01 - EP KR); **F22B 31/0084** (2013.01 - EP KR US); **F23C 10/26** (2013.01 - EP KR US); B01J 2208/00548 (2013.01 - EP KR US); B01J 2208/00752 (2013.01 - EP KR US); B01J 2208/00761 (2013.01 - EP KR US)

Citation (search report)

See references of WO 2020039117A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020039117 A1 20200227; AU 2018438149 A1 20210325; AU 2018438149 B2 20220721; CN 112867559 A 20210528; CN 112867559 B 20230728; EP 3840871 A1 20210630; JO P20210023 A1 20210131; JP 2021534955 A 20211216; JP 7158560 B2 20221021; KR 102539819 B1 20230602; KR 20210046040 A 20210427; PH 12021550267 A1 20211011; SA 521421288 B1 20231213; US 11331637 B2 20220517; US 2021316264 A1 20211014; ZA 202101089 B 20220727

DOCDB simple family (application)

FI 2018050603 W 20180824; AU 2018438149 A 20180824; CN 201880096684 A 20180824; EP 18769413 A 20180824; JO P20210023 A 20180824; JP 2021505983 A 20180824; KR 20217008018 A 20180824; PH 12021550267 A 20210203; SA 521421288 A 20210221; US 201817269702 A 20180824; ZA 202101089 A 20210217